

Claims

1. A coated water-soluble polymer, characterized in that the coating contains water glass.
2. A coated water-soluble polymer according to claim 1, characterized in that the water glass has an SiO_2 to MeO_2 modulus of $M > 1$, preferably of $M \geq 2$ and particularly preferably of $M \geq 3$.
3. A coated water-soluble polymer according to claim 1 and 2, characterized in that the water glass is a sodium water glass.
4. A coated water-soluble polymer according to claim 1 to 3, characterized in that the coating amounts to 0.1 to 25 wt%, preferably 0.5 to 10 wt% and particularly preferably 1 to 5 wt% of the coated polymer.
5. A coated water-soluble polymer according to claim 1 to 4, characterized in that the coating contains a further inorganic and/or organic water-soluble salt.
6. A coated water-soluble polymer according to claim 5, characterized in that the further inorganic and/or organic water-soluble salt is disposed in a separate layer underneath the outer, water-glass-containing layer.
7. A coated water-soluble polymer according to claim 5 and 6, characterized in that the further inorganic and/or organic water-soluble salt is selected from the group of alkali metal salts comprising the carbonates, sulfates, halides, mono-, di- and triphosphates, borates, phosphonates, carboxylates, nitrates, sulfonates, acetates, hydroxycarboxylic acids and amino acids and its proportion in the coating amounts to 1 to 99 wt%, preferably 2 to 70 wt% and particularly preferably 5 to 50 wt%.

8. A coated water-soluble polymer according to claim 1 to 7, characterized in that it is treated with an anti-blocking agent.

9. A coated water-soluble polymer according to claim 1 to 8, characterized in that the water-soluble polymer is a homopolymer or copolymer of acrylamide.

10. A coated water-soluble polymer according to claim 9, characterized in that the copolymer is anionic.

11. A coated water-soluble polymer according to claim 10, characterized in that it was synthesized using acrylic acid, vinylsulfonic acid, acrylamidomethylpropanesulfonic acid and/or salts thereof.

12. A coated water-soluble polymer according to claim 9, characterized in that the copolymer is cationic.

13. A coated water-soluble polymer according to claim 12, characterized in that it was synthesized using cationized esters or amides of (meth)acrylic acid, each containing one quaternized N atom, preferably quaternized dimethylaminopropylacrylamide and quaternized dimethylaminoethyl acrylate.

14. A coated water-soluble polymer according to claim 1 to 8, characterized in that the water-soluble polymer is a modified polysaccharide.

15. A method for synthesizing the polymers according to claim 1 to 14, characterized in that the water-soluble polymer is coated while being intermixed with an aqueous solution of the coating agent and coating is performed several times if necessary.

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16. A method according to claim 15, characterized in that the aqueous solution of the coating agent has a concentration of 1 to 40 wt%, preferably to 2 to 30 wt% and particularly preferably 3 to 10 wt%.

17. A method according to claim 15 and 16, characterized in that intermixing is achieved at elevated temperature and water is evaporated simultaneously.

18. A method according to claim 15 to 17, characterized in that intermixing is achieved in a fluidized bed.

19. A method according to claim 15 to 18, characterized in that the supply-air temperature in the fluidized bed is in the range of 40°C to 150°C, preferably 60°C to 110°C, and particularly preferably 70°C to 90°C.

20. The use of the polymers according to claim 1 to 14 for water treatment, especially as flocculation agents in waters of the paper industry, of the mining industry and of the clarifying-plant industry.

21. The use of the polymers according to claim 1 to 14 as thickening agents and adhesive agents.